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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,748	10/30/2003	Bruce B. Doris	FIS920030264 (00750483AA)	6189
30743	7590	08/17/2006	EXAMINER LE, THAO X	
WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C. 11491 SUNSET HILLS ROAD SUITE 340 RESTON, VA 20190			ART UNIT 2814	

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,748

Applicant(s)

DORIS ET AL.

Examiner

Thao X. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12, 16-19 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. recited the limitation "the first and second film ...exhibit either tensile or compressive properties" is broaden the scope of claim 10. Assuming the limitation would read as 'the first film is tensile stress and second film is compressive stress'.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 10-12 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pub2003/0181005 to Hachimine et al.

Regarding claim 10, Hachimine discloses a structure that adjusts carrier mobility in CMOS transistors in fig. 24 or 31 comprising: a substrate 1 [0164], a first transistor (n-

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ch MISFET) having a gate dielectric 5, gate electrode 6, and source/drain 7/10 [0165], and gate region 12 [0167], formed on said substrate 1, a second transistor (p-ch MISFET) having a gate dielectric 5, gate electrode 6, and source/drain 8/11, and gate regions 12, fig. 15, formed on said substrate 1, a first film 14a providing tensile stress [0168] at least at the channel of first transistor, a second film 14b providing compressive stress [0168] at least at the channel of second transistor, a portion of said second film 14b extending in the same region of said substrate as a portion of said first film 14a, fig. 24 or 31, and a shear force isolation layer 15 [0170] separating said first film 14a and said second film 14b and said tensile and compressive stress therein in at least one area, fig. 15.

Regarding claim 11, Hachimine discloses the structure wherein the first tensile stress and second compressive stress films can be composed of nitride, oxide [0168].

Regarding claim 12, Hachimine discloses the structure wherein the first tensile and second compressive stressed films 14a/14b are separated by said shear force isolation layer 15 at all points of overlap, fig. 24 or 31.

Regarding claim 16, Hachimine discloses the structure wherein said first and second stressed films 14a/14b are separated by the shear force isolation layer 5 at selected areas.

Regarding claim 17, Hachimine discloses the structure wherein said first stressed film 14a, closer to the substrate than said second stressed film 14b, fully surrounds the NMOS transistor, fig. 31.

Regarding claim 18, Hachimine discloses the structure wherein said first stressed film 14a is the only separation between the nMOS transistor and said second stressed film 14b, fig. 31.

Regarding claim 19, Hachimine discloses the structure wherein said second stressed film 14b surrounds said oxide liner 15 at the sides of the PMOS transistor gate electrode 6 with the top of the gate directly engaged with said second stressed film 14b, fig. 31.

Response to Arguments

4. Applicant's arguments filed 10 July 2006 have been fully considered but they are not persuasive. The Applicant argues that it is well known in the art that not all dielectric layers and not even silicon oxide layers can provide stress isolation. This is not persuasive because it is apparent the Applicant reads a "non-stressed" limitation of the oxide layer 12 or 120 into the claim. It is noted that the features upon which applicant relies (i.e., non-stress) are not recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, it is proper to use the specification to interpret what the applicant meant by a word or phrase recited in the claim. However, it is not proper to read the limitations appearing in the specification into the claim when these limitations are not recited in the claim; *Intervet America Inc. v. Kee-Vet Lab. Inc.*, 887 F.2d 1050, 1053, 12 USPQ2d 1474, 1476 (Fed. Cir. 1989). In this case, the dielectric layer 15 of Hachimine is

between tensile and compressive layers 14a and 14b, respectively; thus it would be a "shear force isolation layer" between layers 14a and 14b.

Allowable Subject Matter

5. Claims 13-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art of record neither anticipated nor rendered obvious all the limitations of claim 13 including 'the first stressed film, closer to the substrate than the second stressed film, does not fully surround the nMOS transistor, but rather the sides only, while the remaining surfaces of the nMOS transistor are contacted by said shear force isolation layer'.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Thao X. Le', with a stylized, sweeping underline.

Thao X. Le
14 Aug. 2006